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Polycom SoundStation IP3000

OVERVIEW

The purpose of the document is to provide guidelines on how to install a Polycom SoundStation IP3000. Basically the OmniPCX4400 programming is identical to the programming of any H323 terminal.

For complementary information check also the following documents :

- TC0034En : configuring an inter pabx link in VoIP
- Polycom_IP3000_adminguide.pdf (attached)
- Polycom_IP3000_usersguide.pdf (attached)

General information

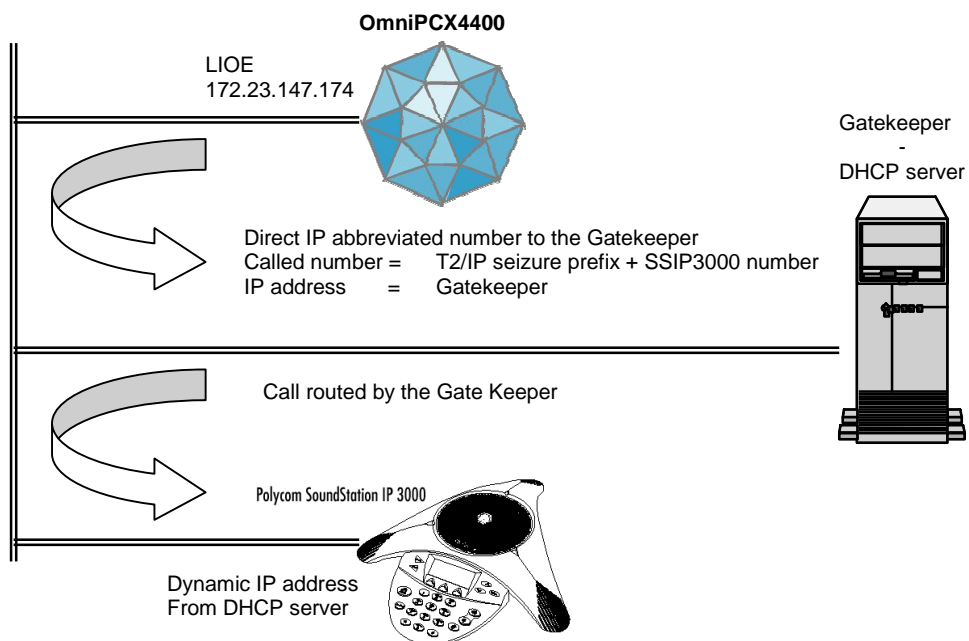
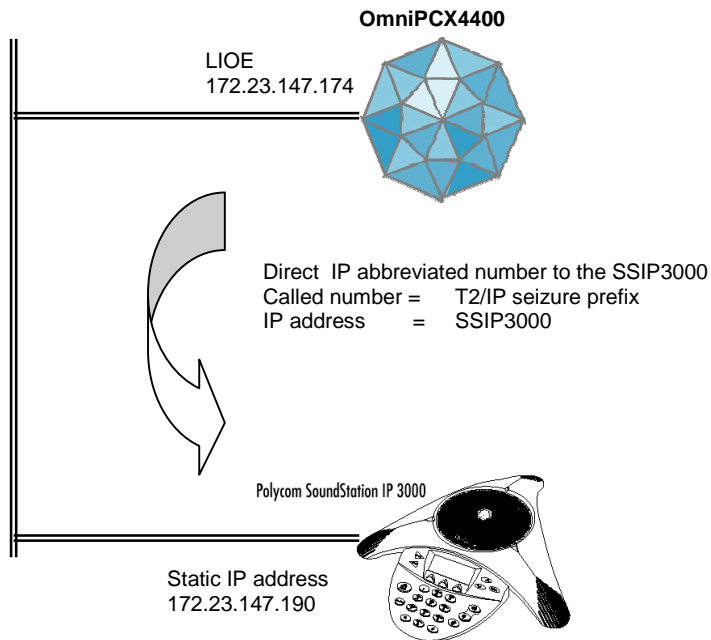
The Polycom SoundStation IP3000 is an IP based conference device operating in hands-free mode. The model tested is supporting H323 V2 with G711 or G729a (μ -law and A-law).

Polycom SSIP3000 : Software and Hardware versions tested

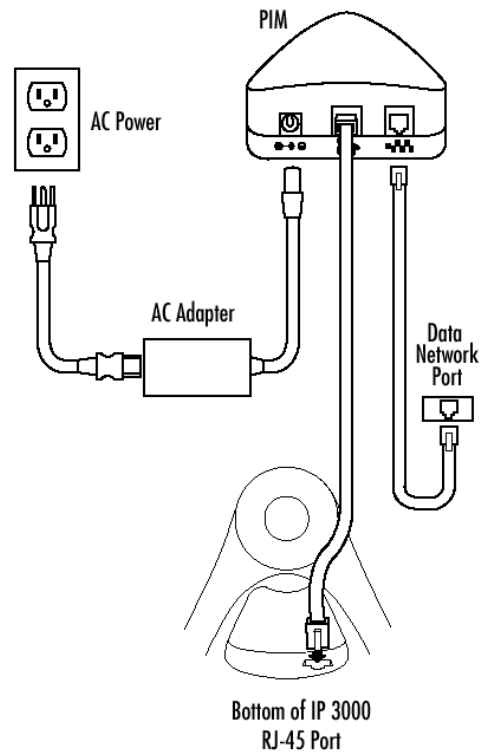
- Boot version 02
- OS version 03
- SW version 0.12V
- SW file S010012V0203.BIN
- HW Revision 06

The configuration of the terminal is accessible from a programming mode on the set itself (using the "Menu" key) or from a web browser (of course the terminal should have its own IP address already allocated dynamically by a DHCP server or manually from the programming "Menu").

Network layout (examples)



Connections



MANAGEMENT ON OMNIPCX4400

System Parameters

Compression Parameter : see the management example

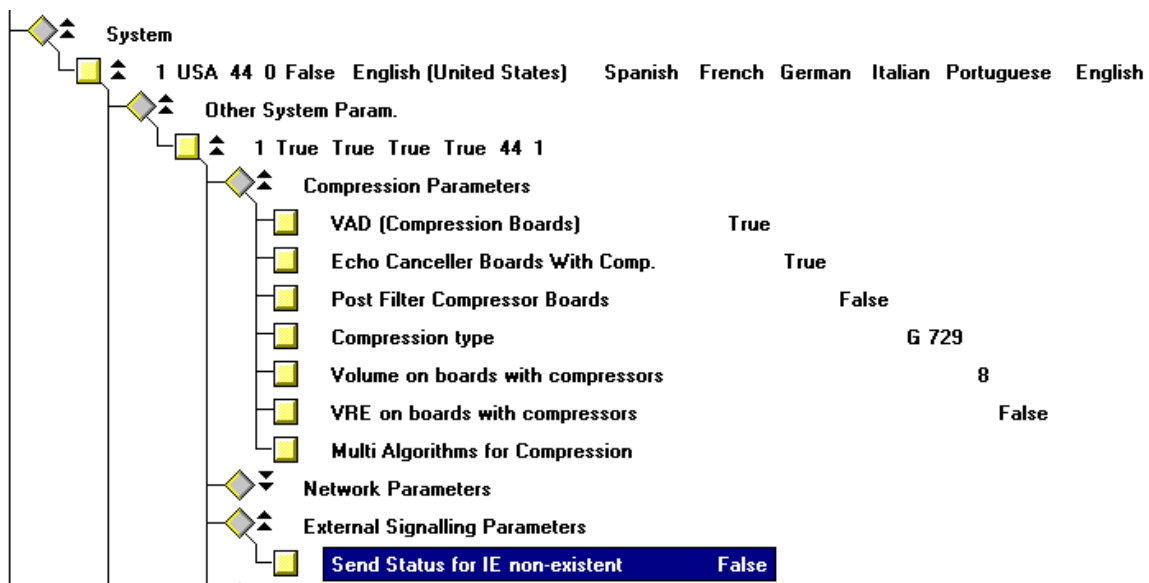
The audio codec supported on the Polycom SSIP3000 are G711 and G729a. If you want to use compression on the OmniPCX LIOE access set the Compression type parameter to G729.

External Signaling Parameters

The Polycom SSIP3000 is sending the Caller's Name in the SETUP message. This Information Element is not supported in Release 4.1 and a STATUS message is sent by the OmniPCX to the Polycom SSIP3000. The communication can not be established.

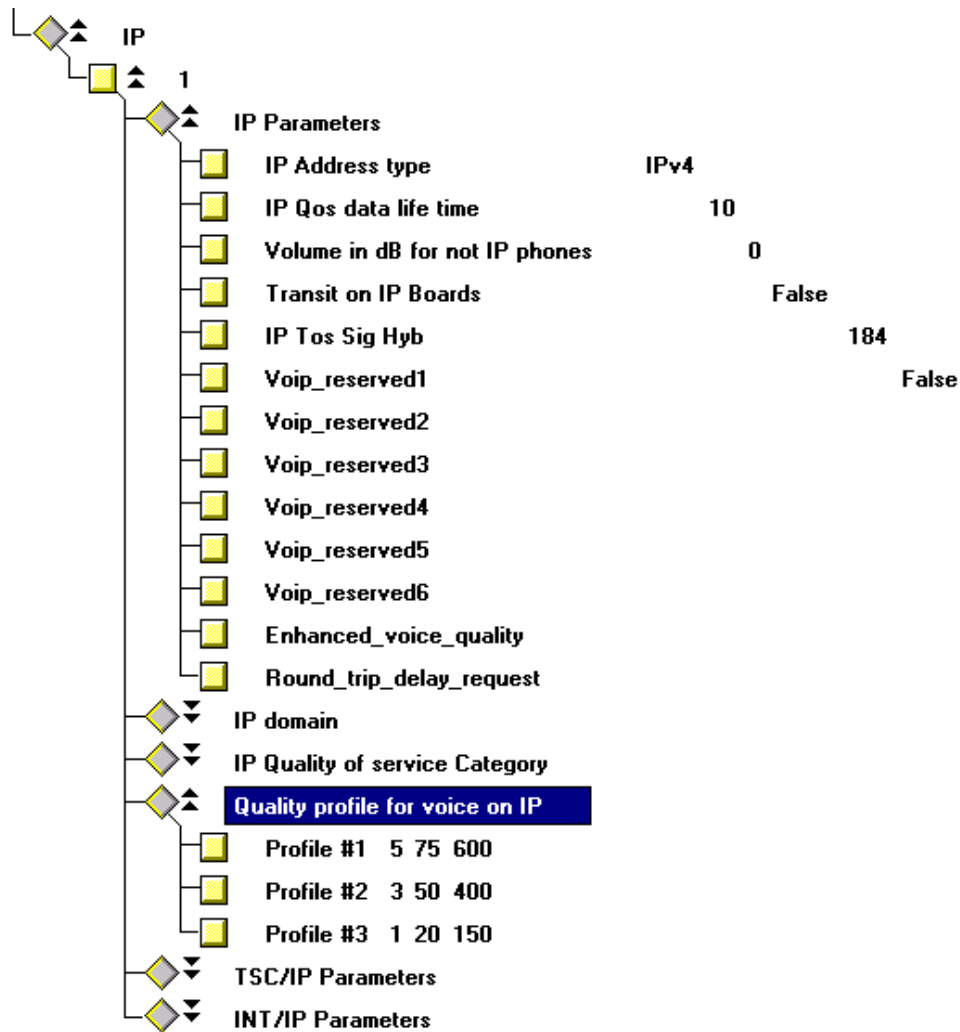
By default the parameter "SEND STATUS FOR IE NON-EXISTENT" is set to TRUE.

CAUTION : If you are in release 4.1 or 4.1.1 do not forget to set this parameter to FALSE.



IP Parameters

Check the IP parameters and the QoS Categories and profiles.



LIOE board

Create a LIOE board for Voice Compression on the Hybrid Link over IP.

Shelf Address	: 0	
Board Address	: 4	
Interface Type	: LIOE	
Operational State	: Enabled	
Usage State	: Busy	
Main/Standby State	: Main (Master)	
Number Of Sets Being Connect.	: 1	
Country Protocol Type	: Default	
Incidents Teleservice	: YES	
Daughter board equipped	: NO	(note1)
Nb of Compressors for Gateway	: 12	(note2)
Mode	: Gateway IP	
Associated BBC2 coupler	: 255	
Associated BBC2 access	: 255	

Note 1 : If CHC12 daughter board is equipped the attribute value must be YES

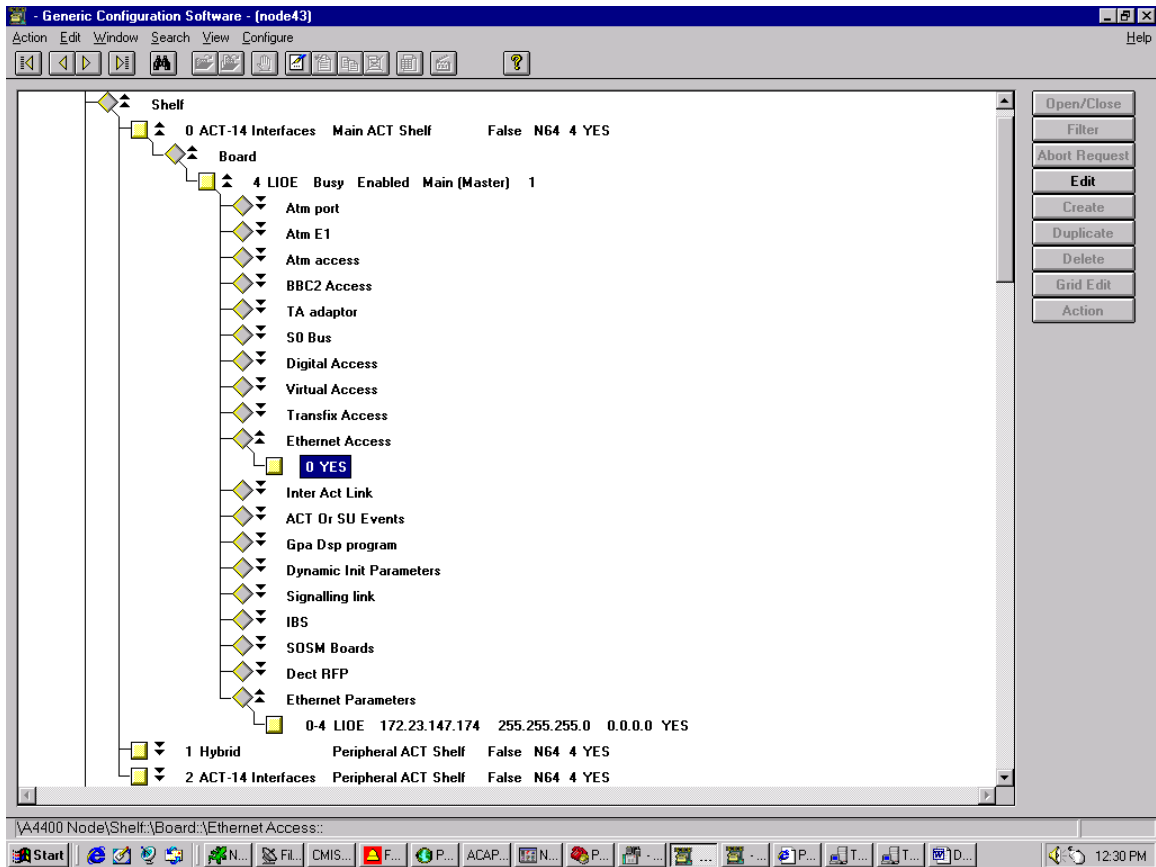
Note 2 : Maximum=12 if CHC12 daughter board not equipped

Maximum=30 if CHC12 daughter board equipped

Ethernet Access and Ethernet Parameters

Shelf Address	: 0	
Board Address	: 4	
Access No.	: 0	
Node Number (reserved)	: 43	
Shelf Address	: 0	
Board Address	: 4	
Shelf - Board Address	: 0-4	
Interface Type	: LIOE	
Board IP Address	: 172.23.147.174	
NetMask IP	: 255.255.255.0	
Default Gateway IP Address	: 0.0.0.0	(note1)
IP Quality of service	: 0	
Embedded interface	: NO	
Interworking with Gatekeeper	: NO	(note1)
Gatekeeper IP Address	: 0.0.0.0	(note1)

Note 1 : Depending on your own site environment.



IP Trunk Group

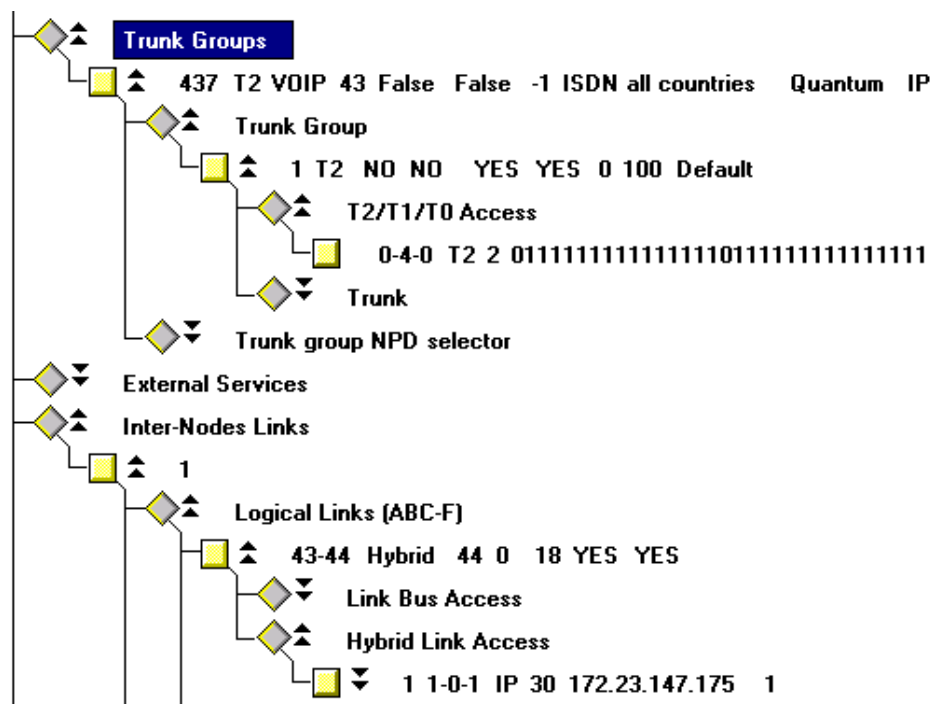
Create the “T2” trunk group used as a gateway by H323 terminals (and/or for VPN in case of Voice over IP ABC networking).

Global Parameters :

- Trunk group type : T2
- Q931 variant : ISDN all country
- Remote Network : VPN hop remote network (if the trunk group is used as VPN/IP networking access)
- T2 specificity : IP

















Local Parameters :

- B Channel choice = YES (on both end, if the trunk group is used as VPN/IP networking access)
- VPN TS % = 100
- IP compression type = default
- Quality profile for VOIP = Profile #2 (for example)



Global Parameters :

- Trunk group type : T2
- Q931 variant : ISDN all country

 Trunk Group Type	<input type="text" value="T2"/>
 Trunk Group Name	<input type="text" value="VOIP"/>
 Node number	<input type="text" value="43"/>
 Transcom Trunk Group	<input type="checkbox"/> True
 Auto.reserv.by Attendant	<input type="checkbox"/> True
 Overflow trunk group No.	<input type="text" value="-1"/>
 Tone on seizure	<input type="checkbox"/> True
 Private Trunk Group	<input type="checkbox"/> True
 Paging Trunk Group	
 Paging Table Id	
 Paging Signalization	
 Security Patrol	
 Q931 signal variant	<input type="text" value="ISDN all countries"/>
 Operator Id	
 SS7 signal variant	<input type="text" value="No variant"/>
 Number Compatible With	<input type="text" value="-1"/>

















Global Parameters :

- Remote Network : VPN hop remote network (if the trunk group is used as VPN/IP networking access)
- T2 specificity : IP

? Prefix Sending	
? Number Of Digits To Send	0
? Channel selection type	Quantum
? Remote Network	10
? Shared Trunk Group	<input type="checkbox"/> True
? T.line Calling last dig.length	
? auto.DTMF dialing on outgoing call	YES
? T2 Specificity	IP
? Public Network Category	0
? DDI transcoding	<input type="checkbox"/> True
? Special Services	Nothing
? Can support UUS in SETUP	<input checked="" type="checkbox"/> True
? Register Signalling	



















Local Parameters :

- B Channel choice = YES (on both end if the trunk group is used as VPN/IP networking access)

 Trunk Group Type	T2
 Public Network Ref.	
 Dialling end to end	NO
 DTMF end to end signal.	NO
 Paying Incoming Calls	
 TS Permanently assigned	
 Min. Nb.of digits on seize	
 Signal.with access code	
 Trunk group used in DISA	NO
 DISA Secret Code	
 VG for non-existent No.	YES
 Routing To Executive	NO
 Trunk Category Id	19
 Nb of digits unused (ISDN)	0
 B Channel Choice	YES
 Channels Reserved By Attend.	0
















Local Parameters :

- VPN TS % = 100

 Dissuasion For ACD	<input type="text" value="NO"/>
 DTO joining	<input type="text" value="NO"/>
 Enquiry Call On B Channel	<input type="text" value="NO"/>
 DDI Mode	
 Automated Attendant	<input type="text" value="NO"/>
 Calling party Rights category	<input type="text" value="0"/>
 Entity Number	<input type="text" value="0"/>  
 TS Overflow	<input type="text" value="YES"/>
 Number To Be Added	<input type="text"/>
 Supervised by Routing	<input type="text" value="YES"/>
 Access Cluster Id	
 VPN Cost Limit for Incom.Calls	<input type="text" value="0"/>
 Immediat Trk Listening For VPNCall	<input type="text" value="YES"/>
 VPN TS %	<input type="text" value="100"/>
 Csta Monitored	<input type="text" value="NO"/>
 Max.% of trunks out CCD	<input type="text" value="0"/>

Local Parameters :

- IP compression type = default (or G711 if needed)
- Quality profile for VOIP = Profile #2 (for example)

 Charge Calling And ADN Creation	<input type="button" value="NO"/>
 Ratio analog.to ISDN tax	<input type="text" value="1.0"/>
 Collect Calls Allowed	
 Priority of Call	
 PCM Network Mode	
 LogicalChannel	<input type="button" value="1_15 & 17_31"/>
 TS Distribution on Accesses	<input type="button" value="YES"/>
 Use Split Acces	<input type="button" value="NO"/>
 Heterogeneous Remote Network	<input type="button" value="NO"/>
 Barring mode	<input type="text" value="Not barred"/>
 ARS class of service	<input type="text" value="31"/>
 Quality profile for voice on IP	<input type="button" value="Profile #2"/>
 IP compression type	<input type="button" value="Default"/>
 Use of volume in system	<input type="button" value="YES"/>
 Local volume (dB)	

H323 terminal

From the OmniPCX point of view, the Polycom SSIP3000 has to be programmed as a H323 terminal. To do so, two different options are possible.

Option 1 : The Polycom SSIP3000 is using a static IP address. In this case there is no need of an external Gatekeeper server. Create an IP abbreviated number.

Call Number : T2/IP Direct trunk group seizure prefix.
Call Type : IP
IP address : static address of the Polycom SSIP3000

Direct Abbr.No Prefix	<input type="text" value="43700"/>
Call Number	<input type="text" value="#437"/>
Directory name	<input type="text" value="Polycom"/>
Directory First Name	<input type="text" value="43700"/>
Barring	<input type="checkbox"/> True
Overfl.Dir.Abbrev.No Pref.	<input type="text"/>
Auto.Attendant Calling Right	<input type="text" value="0"/>
Call Type	<input type="text" value="IP"/>
Timed Forward.Dir.Abbrev.No.	<input type="text"/>
Range Number	<input type="text" value="255"/>
Can Be Called By Name	<input type="text" value="YES"/>
Phone book Name (Call by name)	<input type="text" value="Polycom"/>
Phone book First Name	<input type="text" value="43700"/>
Displayed Name	<input type="text" value="Polycom 43700"/>
External DISA Dir.No.	<input type="text"/>
IP Address	<input type="text" value="172.23.147.190"/>

Caution : In a network, the IP abbreviated number created on one node will be normally broadcasted to the other nodes. To be able to use the same abbreviated number all over the network do not forget to create the remote IP trunk group seizure prefix on each node (#437 in the given example).

Option 2 : If the Polycom SSIP3000 is using a DHCP server, a Gatekeeper server will be needed to route the calls.

Create an IP abbreviated number

Call Number : T2/IP trunk group seizure prefix + SSIP3000 directory number
Call Type : IP
IP address : IP address of the Gatekeeper.

Direct Abbr.No Prefix	<input type="text" value="43700"/>
Call Number	<input type="text" value="#43743700"/>
Directory name	<input type="text" value="Polycom"/>
Directory First Name	<input type="text" value="43700"/>
Barring	<input type="checkbox"/> True
Overfl.Dir.Abbrev.No Pref.	<input type="text"/>
Auto.Attendant Calling Right	<input type="text" value="0"/>
Call Type	<input type="text" value="IP"/>
Timed Forward.Dir.Abbrev.No.	<input type="text"/>
Range Number	<input type="text" value="255"/>
Can Be Called By Name	<input type="text" value="YES"/>
Phone book Name (Call by name)	<input type="text" value="Polycom"/>
Phone book First Name	<input type="text" value="43700"/>
Displayed Name	<input type="text" value="Polycom 43700"/>
External DISA Dir.No.	<input type="text"/>
IP Address	<input type="text" value="172.23.147.185"/>

MANAGEMENT ON POLYCOM SSIP3000

Basic Configuration

Users and administrators configuration are available directly from the set programming mode using the “Menu” key or from a web browser.

Basic Configuration using the Polycom SSIP3000 programming mode : MENU key

Follow this steps for a basic programming of the Polycom SSIP3000 terminal. For more information please consult the attached documents :

- Polycom_IP3000_adminguide.pdf
- Polycom_IP3000_usersguide.pdf

Press	MENU	
Move the cursor to	ADMIN SETUP	
Press	SELECT	
Enter the password	**#	
Move the cursor to	NETWORK SETUP	
Press	SELECT	
Move the cursor to	IP ADDRESS	
Enter the IP address	172.23.147.190	(for example)
Press	SAVE	
Move the cursor to	IP MASK	
Enter the IP Netmask	255.255.255.0	(for example)
Press	SAVE	
Move the cursor to	GW0	
Enter the GateWay 0 :	172.23.147.174	(IP address of the LIOE board)
Press	SAVE	
Move the cursor to	GW1	
Enter the GateWay 1 :	172.23.147.177	(IP address of an alternate LIOE board) (eventually on a remote node)
Press	SAVE	
Move the cursor to	GW2	
Enter the GateWay 2 :		(no gateway #2 in the example)
Press	SAVE	
Press	EXIT	

To reboot the Polycom SSIP3000 press the following keys : **#**

CAUTION : On the SSIP3000 software release tested, changing the Gateway IP address from the set menu may not be correctly taken in memory. If you have difficulties to validate your modification please use the web browser interface.

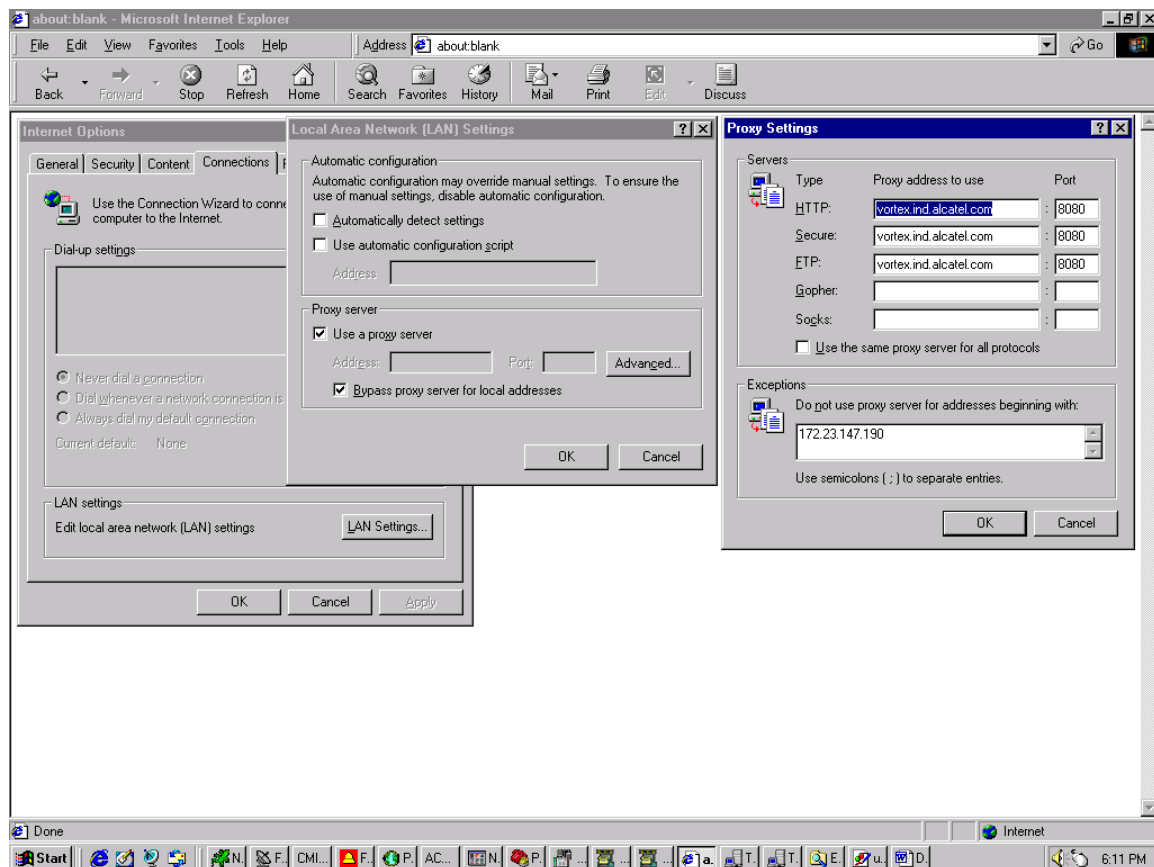
Basic Configuration using a web browser interface.

The Polycom SSIP3000 terminal should have an IP address already programmed.

For more information please consult the attached documents :

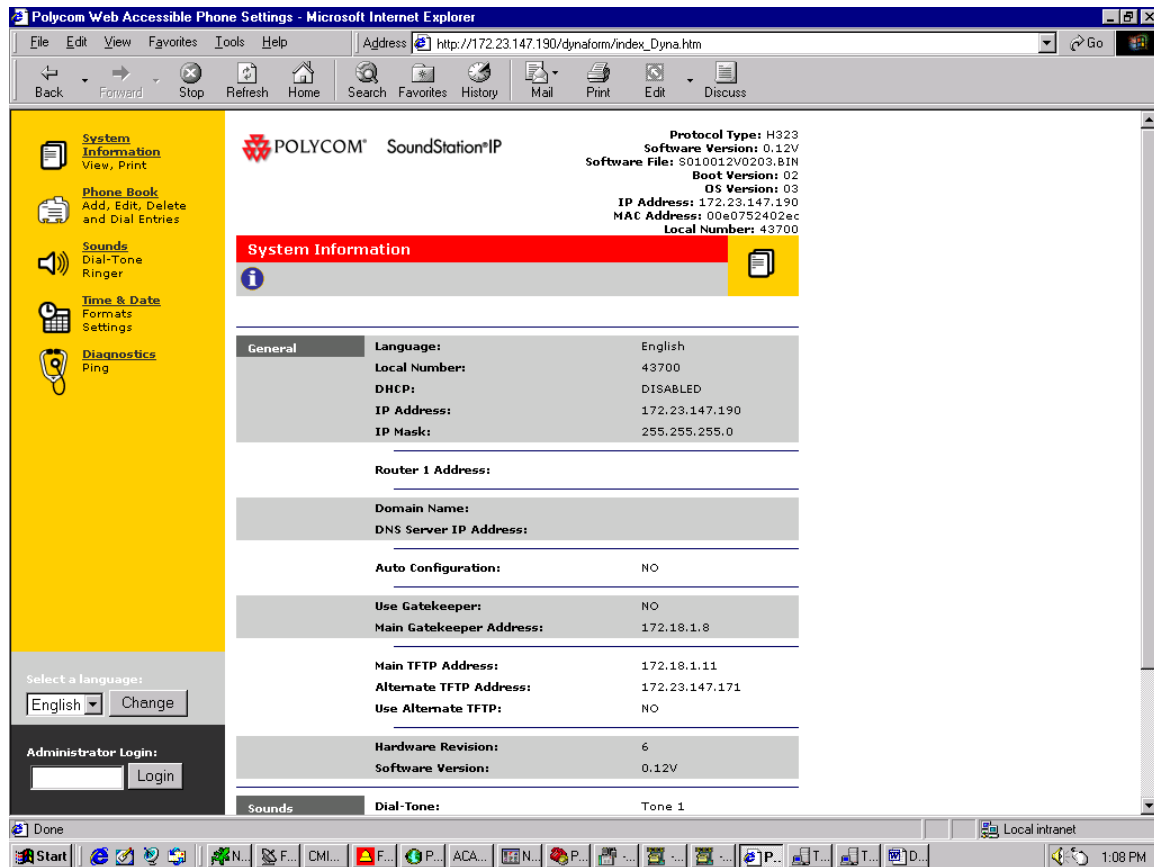
- Polycom_IP3000_adminguide.pdf
- Polycom_IP3000_usersguide.pdf

On your web browser enter the Polycom SSIP3000 IP address as a Proxy exception.

TOOLS / INTERNET OPTIONS / CONNECTIONS / LAN SETTINGS / ADVANCED

Polycom SoundStation IP3000

To be able to connect to the Polycom SSIP3000 management interface via your browser just enter the IP address of the terminal : <http://172.23.147.190> (in our example)



Administrator login : **#

Similar parameters are available under an HTML environment.

BASIC CALLS

Placing Calls between the Polycom SSIP3000 and OmniPCX telephone sets.

From OmniPCX to SSIP3000

Use the IP abbreviated number and check that the IP trunk group seizure has been created on the node

From SSIP3000 to OmniPCX

Press the off hook key

Dial the gateway index (or IP address) you would like to use, followed by * (star) and by the OmniPCX extension number to reach.

For example if you want to call extension 43003 using the gateway 0 (associated to the LIOE board 172.23.147.174) dial :

0*43003 or 172.23.147.174*43003

To place a second call put the first call on Hold. You can switch from one communication to the other by using the arrow keys.

Another possibility is to program the Polycom phonebook. Please consult the user's manual.

MAINTENANCE TOOLS AND TRACES

- > compvisu lio : State of the LIOE boards and compressor status
- > compvisu ip : IP configuration of the LIOE board
- > compvisu sys : IP system parameters
- > compvisu visu : VOIP communications in progress
- > compvisu "act" "cpl" : Detailed status of the LIOE board compressor
- > voipstat "act" "cpl" : Statistic on the QoS
- > suproustage : Network supervision

- > traceroute "IP address" : Trace the path for reaching a given IP address

Trace the VPN hop and VOIP network communications :

- tcyc aux off
- tcyc cpl off
- tcyc dectbs off
- tuner km
- tuner clear-traces
- tuner hybrid=on +at +cpl +cpu
- actdbg vpn=on ars=on voip=on
- mtracer -a

Trace the H323 communication :

- t3

End of Document